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UNCLAS SECTION 01 OF 02 HONG KONG 000190

SENSITIVE
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TAGS: [SFNV](#) [TPHY](#) [HK](#) [CH](#)
SUBJECT: SCIENCE FELLOW HELPS HK CLEAR THE AIR

REF: 08 HONG KONG 2051

1.(U) SUMMARY: Dr. Golam Sarwar, a U.S. EPA atmospheric chemist and air modeling expert, was posted in Hong Kong as a Department of State Science Fellow from September 29) November 28, 2008 (Reftel). His two-month stay was a positive example of how the presence of U.S.-based experts, working in cooperation with our diplomatic missions abroad, can vigorously advance both American environmental and public diplomacy goals. Dr. Sarwar,s research in Hong Kong provided valuable new information about the relationship between air pollution-induced chemical reactions in the Pearl River Delta (PRD) and regional ozone levels. His research also confirmed that small respirable suspended particulate matter in the atmosphere is a serious problem in Hong Kong. Dr. Sarwar,s assignment and his collaboration with local scientists, activists, and government officials also clearly demonstrated our seriousness about environmental protection and laid the groundwork for future cooperation. END SUMMARY.

Science Fellowship Reaps Positive Results

12. (SBU) Dr. Sarwar came to Hong Kong to conduct air-quality modeling and other research to test the hypothesis that air pollutants in the atmosphere above the PRD are reacting with sunlight to produce nitrous acid (NO2), which in turn reacts with other chemicals to produce ozone. Ozone can seriously affect human health when found in high concentrations in the lower atmosphere. Soon after arrival, Dr. Sarwar met with scientists from the HKG Environmental Protection Department's (EPD) Air Science Group to brief them on his research. The EPD enthusiastically supported his efforts by granting him access to several years' worth of data from their air monitoring stations in Hong Kong. EPD officials also sponsored a trip for and accompanied Dr. Sarwar to Guangzhou,s South China University of Technology to consult with Guangdong Province EPD counterparts and researchers in mainland China.

3.(SBU) In addition to the EPD Air Science Group, Dr. Sarwar met with and briefed faculty members and graduate students at Hong Kong Polytechnic University and the Hong Kong University of Science and Technology (HKUST). The HKUST Environmental Engineering Department offered to allow Dr. Sarwar to install U.S. EPA-developed air modeling software, updated with specific NO2 chemistry, and to run HKUST air pollution data through the model to evaluate the impact of NO2 chemistry on ozone. Initial evaluation of the computer simulation data showed only a slight rise in overall ozone attributable to the NO2 chemistry. Additional evaluation shows that ozone levels in Hong Kong, while present and problematic, on many days are well below U.S. National Air Quality Standards and EPA- recommended safe levels. Ozone levels only exceeded the U.S. Standards on 28 days in 2007. HKUST's Environmental Engineering Department is committed to continuing collaboration with Dr. Sarwar and will work with him to

fine-tune the model using local data. Dr. Sarwar and his partners at HKUST plan to jointly publish the results of their collaboration.

4.(SBU) Although his original hypothesis on ozone was not supported by the Hong Kong data, Dr. Sarwar did confirm that respirable particulate matter at the 2.5 micron level (PM2.5) is a significant health threat in Hong Kong. Hong Kong,s mean annual levels of PM2.5 are 2.6 times the U.S. EPA-determined safe levels for this pollutant. Hong Kong is just beginning to consistently measure PM2.5 and currently has no standards or regulations governing particulate matter below 10 microns in size. In addition to his NO2-ozone research, Dr. Sarwar spent significant time with the EPD Air Quality Team discussing PM2.5 pollution and assisting them in fine-tuning measurement techniques. The EPD is now developing proposed PM2.5 emission standards for enactment.

Science Fellowship Boosts Consulate Credibility

5.(SBU) In addition to his scientific research and exchanges with government officials, Dr. Sarwar conducted numerous public outreach events in support of efforts to improve air quality in Hong Kong. Dr. Sarwar presented seminars on air quality issues at the HKG EPD, HKUST, Hong Kong Polytechnic University and the American Chamber of Commerce in Hong Kong. He also met with Hong Kong NGO,s involved in environmental issues and faculty at Hong Kong University. He was enthusiastically received at each venue, raising visibility and awareness of the Department,s Science Fellowship program and Consulate General Hong Kong's own environmental advocacy

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efforts. Consulate General Hong Kong will continue reaping the benefits of Dr. Sarwar,s participation in the Science Fellowship Program and the solid relationships he forged with air quality experts from all sectors well beyond his brief tenure in Hong Kong. His credibility on air quality issues has boosted our own efforts to encourage the Hong Kong government to tackle this serious problem.
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